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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,522	01/25/2001	Peter Haas	P00,1963	8561

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EXAMINER	
PRICE, NATHAN E	

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/744,522	HAAS, PETER	
	Examiner	Art Unit	
	Nathan Price	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 10 – 20 are pending. Claims 1 – 9 have been canceled.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 March 2006 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 10 – 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claims 12, 13 and 18 are objected to because of the following informalities: There is a spelling error (whrein) in line 2 of claim 12. There is a lack of antecedent basis for "the storing" in lines 2 – 3 of claim 13. There is a lack of antecedent basis for "the memory address" in line 4 of claim 18. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 10 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 5,828,884), hereinafter Lee, in view of Shaw et al. (US 5,754,766), hereinafter Shaw.

7. As to claim 10, Lee discloses a hardware architecture for a core of a processor (col. 6 lines 39 – 41), comprising:

at least one unit for executing one of a logical or arithmetic operation (Fig. 5, processor 510); and

a data conversion unit for recognizing a type (abstract) of an object and an object address (col. 3 lines 65 – 67), for external data (col. 3 lines 57 – 62), the data conversion unit being arranged to precede the unit for executing a logical or arithmetic operation (swapping device between storage and processor: col. 3 lines 61 – 62), whereby the data conversion unit recognizes a type of an object based upon a type of information accompanying the object address and matches the type of an object and the object address before one of an operation is

performed or a predetermined type of object is generated in the event of non-match (abstract).

8. Lee fails to specifically state that the architecture is object-oriented. However, Shaw discloses object-oriented designs (col. 5 lines 37 – 44). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine these references because Lee discloses endian conversion and Shaw also discloses data type conversion (col. 36 lines 55 – 59), leading one to seek advantages found in both disclosures to deal with format conversion in order to improve system and data compatibility.

9. As to claim 11, Lee discloses a memory location for the object address and a memory location of a register is respectively divided into a first area and a second area, whereby a type of the object is deposited in the first area (col. 3 line 62 – col. 4 line 3; col. 4 lines 16 – 27; col. 5 lines 60 – 62).

10. As to claim 12, Lee discloses that the data conversion unit is arranged to follow the unit executing a logical or an arithmetic operation (col. 3 lines 61 – 62). The rejection of claim 10 addresses object-oriented data conversion.

11. As to claim 13, Lee discloses that the data conversion unit is arranged to precede the storing of the object in an external storage and a register file (col. 3

lines 61 – 62; col. 5 lines 60 – 62; col. 9 lines 28 – 35). The rejection of claim 10 addresses object-oriented data conversion.

12. As to claim 14, Lee discloses a register file divided into a memory area for data and a memory area for a respective type indication of the data (col. 3 lines 64 – 67; col. 4 lines 10 – 15; col. 9 lines 28 – 35).

13. As to claims 15 and 16, Lee fails to specify a reduced instruction set processor or a complex instruction set processor. However, Shaw discloses inclusion of an embedded RISC or CISC co-processor element (col. 5 lines 37 – 44). See the rejection of claim 10 for motivation to combine.

14. As to claim 17, Lee discloses a method for data conversion in a processor having at least one unit, the method comprising the steps of:

executing a logical or arithmetic operation in the processor (abstract);

implementing a data conversion by a type information in an object address and by a type information of an object (abstract); and

generating an inequality of the objects to be operated by the logical or arithmetic operation based upon the type of objects matched to one another or a predetermined object type of an object (abstract).

See the rejection of claim 10 for object-oriented data with Shaw and motivation to combine.

15. As to claim 18, Lee discloses dividing a memory location for an object address and a memory location of a register file into a first and second area (col. 3 line 64 – col. 4 line 3; col. 4 lines 16 – 38; col. 9 lines 30 – 35) and a type information of the memory address deposited in the second area of the object address (col. 4 lines 28 – 38); and

noting the data of the register deposited in the second area in the first area (col. 4 lines 16 – 27).

16. As to claims 19 and 20, see the rejection of claims 15 and 16.

Conclusion

17. The prior art made of record on the P.T.O. 892 that has not been relied upon is considered pertinent to applicant's disclosure. Careful consideration of the cited art is required prior to responding to this Office Action, see 37 C.F.R. 1.111(c).

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Price whose telephone number is (571) 272-4196. The examiner can normally be reached on 7:30am - 4:00pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NP

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER